

# AHAC-P – MicroSet PIR low/line voltage ceiling sensor

Project Name:	Prepared By:
Project Number:	Date:
Catalog Number:	Type:

## Description

The MicroSet passive infrared occupancy sensing ceiling sensor is a motion sensing lighting control that is used for energy savings and convenience. The line voltage sensor is available in both single & dual load control.

## Design features

- MicroSet self-adjusting time delay and sensitivity
- Units available for control of single or two separate loads
- Products tested to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard
- Built-in light level sensor (Line voltage only)
- Selectable walk through mode (Low voltage only)
- Dual relay control (Low voltage only)



**Table 1. MicroSet PIR - low voltage ceiling sensor**

Catalog no.	Coverage	Field of view	Features
<input type="checkbox"/> AHAC-P-0500	500 sq. ft.	360°	—
<input type="checkbox"/> AHAC-P-1500	1500 sq. ft.	360°	—
<input type="checkbox"/> AHAC-STEM	—	—	—

**Table 2. MicroSet PIR - line voltage ceiling sensor**

Catalog no.	Coverage	Field of view	Features
<input type="checkbox"/> AHAC-P-0500-MV	500 sq. ft.	360°	With daylight sensor
<input type="checkbox"/> AHAC-P-0500-DMV	500 sq. ft.	360°	Dual relay with daylight sensor
<input type="checkbox"/> AHAC-P-1500-MV	1500 sq. ft.	360°	With daylight sensor
<input type="checkbox"/> AHAC-P-1500-DMV	1500 sq. ft.	360°	Dual relay with daylight sensor
<input type="checkbox"/> AHAC-STEM	—	—	—

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## Applications

The sensor is designed to detect motion from a heat-emitting source (such as a person entering a room) within its field-of-view and automatically switch lights ON. These sensors have multi-segmented lenses. For units to sense motion, the person must cross between two segments. The distance between segments increases the farther you are from the sensor, so motion has to be larger the farther you are from the unit. PIR sensors are considered line-of-sight sensors, meaning that the sensor must be able to have a direct line-of-sight to the person making the motion. The sensor includes self-adaptive technology that continuously self-adjusts sensitivity and time delay in real-time, maximizing the potential energy savings that are available in the particular application. The MicroSet passive infrared line voltage, and some low voltage, ceiling sensor have an ambient light level sensor. When enabled, the daylighting feature prevents lights from turning ON when the room is adequately illuminated by natural light.

**Table 3. Specifications**

Catalog no.	AHAC-P - low voltage series
<b>Technology</b>	Passive Infrared (PIR)
<b>Power Requirements</b>	<p><b>Input</b> 10-30 VDC from Greengate Switchpack or Greengate system Maximum current needed is 25mA per sensor</p> <p><b>Output</b> Open collector output to switch up to ten Isolated Form C Relay Ratings: 1A 30 VDC/V/AC</p>
<b>Time Delays</b>	Self-adjustable, 15 seconds/test (10 minutes Auto), or Selectable 5, 15, 30 minutes
<b>Coverage</b>	500 & 1,500 sq. ft.
<b>Light Level Sensing</b>	0 to 300 foot-candles
<b>Operating Environment</b>	<p><b>Temperature:</b> 32°F - 104°F (0°C - 40°C) <b>Relative humidity:</b> 20% to 90%, non-condensing (For indoor use only)</p>
<b>Housing</b>	Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0
<b>Size</b>	1.42"H x 4.5"W (36.068mm x 114.3mm)
<b>Mounting</b>	Mounts directly to ceiling tile, to a 4" square box and round mud ring or to 4" octagon box
<b>LED Indicators</b>	Red LED for PIR detection
<b>Standards</b>	FCC Compliant cULus Listed RoHS Compliant  <b>RoHS</b>

**Table 4. Specifications**

Catalog no.	AHAC-P - line voltage series
<b>Technology</b>	Passive Infrared (PIR)
<b>Power Requirements</b>	<p>120 to 347 V/AC, 50/60 Hz - Neutral Required</p> <p><b>120 V/AC</b> Incandescent/Tungsten - 0 to 800W, 50/60 Hz Fluorescent/Ballast - 0 to 1200W, 50/60 Hz Motor Load: ¼ HP @ 125 V/AC</p> <p><b>230 V/AC</b> Fluorescent/Ballast - 0 to 1200W, 50/60 Hz</p> <p><b>277 V/AC</b> Fluorescent/Ballast - 0 to 2700W, 50/60 Hz</p> <p><b>347 V/AC</b> Fluorescent/Ballast - 0 to 1500W, 50/60 Hz</p>
<b>Time Delays</b>	Self-adjustable, 15 seconds/test (10 minutes Auto), or Selectable 5, 15, 30 minutes
<b>Coverage</b>	500 & 1,500 sq. ft.
<b>Light Level Sensing</b>	0 to 300 foot-candles
<b>Operating Environment</b>	<p><b>Temperature:</b> 32°F - 104°F (0°C - 40°C) <b>Relative humidity:</b> 20% to 90%, non-condensing (For indoor use only)</p>
<b>Housing</b>	Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0
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<b>Mounting</b>	Mounts directly to ceiling tile, to a 4" square box and round mud ring or to 4" octagon box
<b>LED Indicators</b>	Red LED for PIR detection
<b>Standards</b>	FCC Compliant cULus Listed RoHS Compliant  <b>RoHS</b>

**Table 5. Color information**

W (White)

w
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White

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## Wiring diagrams

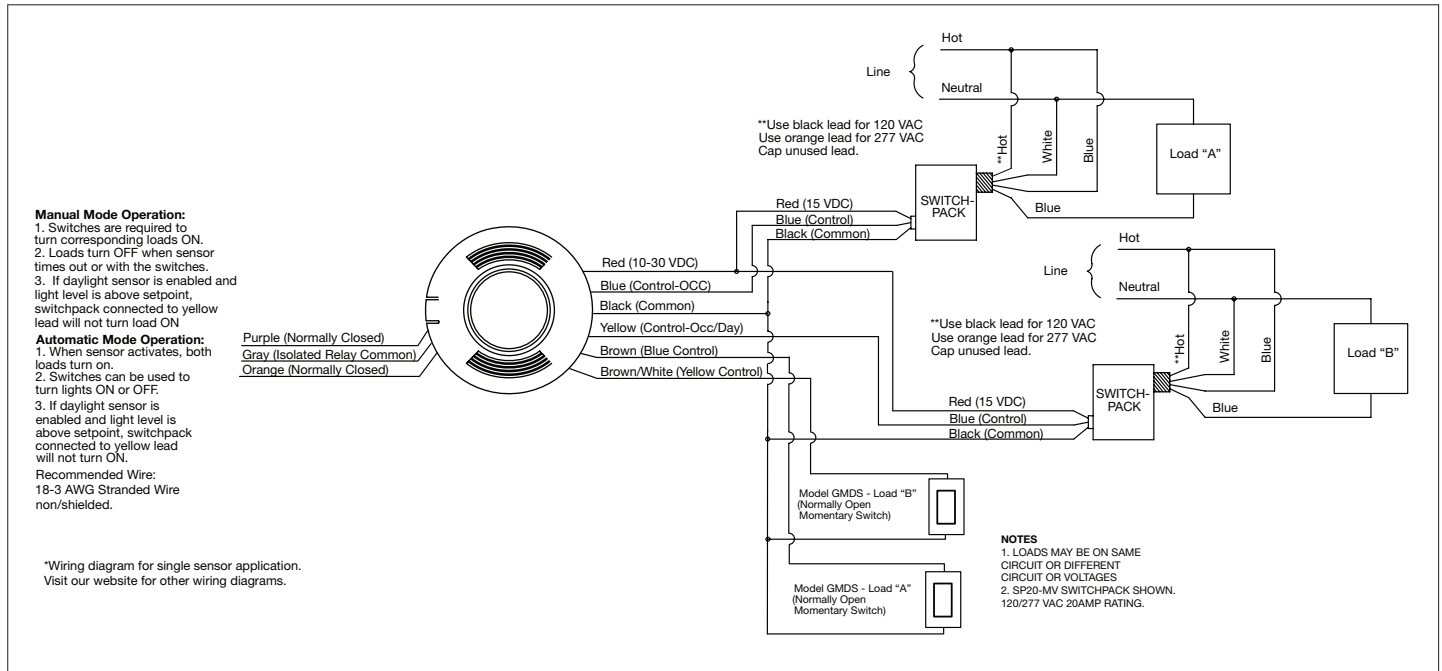


Figure 1. AHAC-P-1500 Model

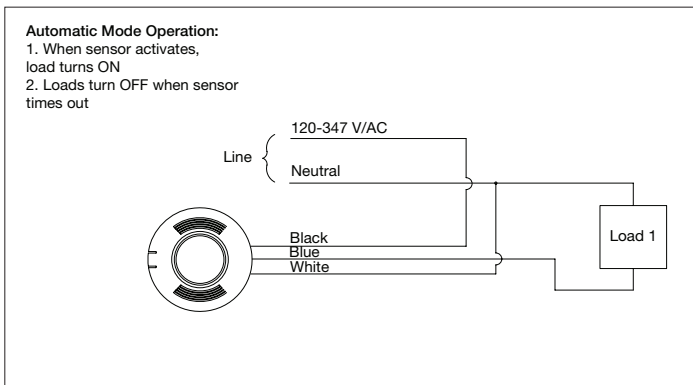


Figure 2. Single relay - line voltage series

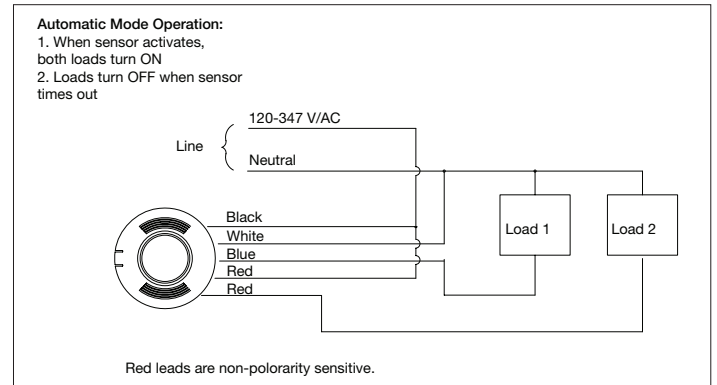
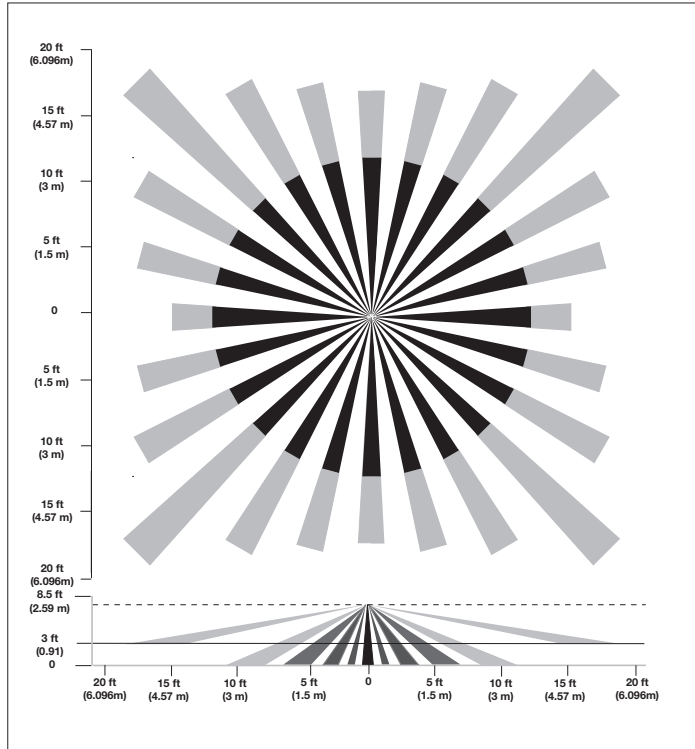


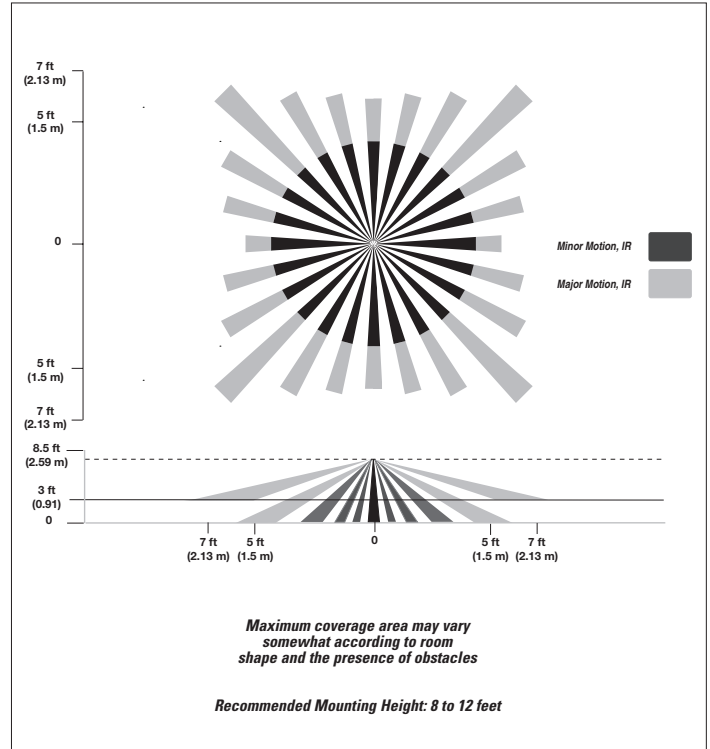
Figure 3. Dual relay - line voltage series

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Catalog Number:	Type:

## Coverage



**AHAC-P-1500-MV/DMV**  
1,500 sq. ft.



**AHAC-P-0500-MV/DMV**  
500 sq. ft.

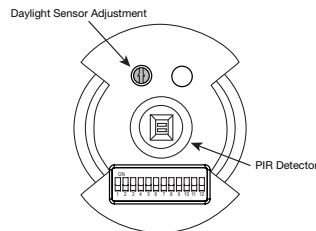
## Controls (Low Voltage)

### DIP Switch Legend

DIP Switch	Time Delay		Activation		PIR Sensitivity	Walk-Through Mode	LEDs	Override	Sweep	Full/Half Logic	HVAC/Tracking	Zero Time Delay
	1	2	Relay 1	Relay 2								
Auto*	▼	▼	Auto ▼	Auto ▼	Full ▼	Disable ▼	Enable ▼	Disable ▼	Disable ▼	Normal ▼	Disable ▼	Disable ▼
5 Minutes	▼	▲	Manual ▲	Manual ▲	50% ▲	Enable ▲	Disable ▲	Enable ▲	Enable ▲	Swap ▲	Enable ▲	Enable ▲
15 Minutes	▲	▼										
30 Minutes	▲	▲										

\*Self-Adjusts to 10 min. user mode

Default =



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Catalog Number:	Type:

## Controls (Line Voltage)

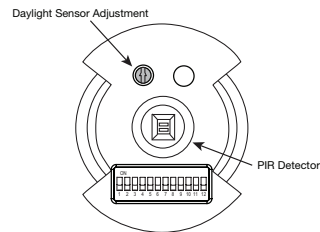
### DIP Switch Legend

DIP Switch	Time Delay		Not Used		PIR Sensitivity	Walk-Through Mode	LEDs		Override	Not Used	Daylighting	Bathroom Mode	Relay Swap
	1	2	3	4	5	6	7	8	9	10	11	12	
Auto*	▼	▼			Full ▼	Disable ▼	Enable ▼	Disable ▼			Relay 2 ▼	Disable ▼	Disable ▼
5 Minutes	▼	▲			50% ▲	Enable ▲	Disable ▲	Enable ▲			Relay 1 & 2 ▲	Enable ▲	Enable ▲
15 Minutes	▲	▼											
30 Minutes	▲	▲											

(DMV model only) (DMV model only) (DMV model only)

\*Self-Adjusts to 10 min. user mode

Default =



## Certifications & compliances

Catalog no.	cULus	RoHS
AHAC-P-0500	•	•
AHAC-P-0500-MV	•	•
AHAC-P-0500-DMV	•	•
AHAC-P-1500	•	•
AHAC-P-1500-MV	•	•
AHAC-P-1500-DMV	•	•
AHAC-STEM		

KEY: cULus RoHS

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